

**FUTURE FISHERIES IMPROVEMENT PROGRAM
GRANT APPLICATION***(please fill in the highlighted areas)***I. APPLICANT INFORMATION**

- A. Applicant Name: Big Hole River Foundation
- B. Mailing Address: PO Box 3894
- C. City: Butte State: MT Zip: 59702
- Telephone: 406-925-2276 E-mail: mikebias@3rivers.net
- D. Contact Person: Michael A. Bias, Ph.D., Executive Director
- Address if different from Applicant: _____
- City: _____ State: _____ Zip: _____
- Telephone: _____ E-mail: _____
- E. Landowner and/or Lessee Name (if other than Applicant): Mary E. Merino, Moose Creek Ranch
- Mailing Address: PO Box 113
- City: Divide State: MT Zip: 59727
- Telephone: 406-593-0000 E-mail: moosecreekcattleco@gmail.com

II. PROJECT INFORMATION*

- A. Project Name: Moose Creek Meadow Stewardship Fence Project
- River, stream, or lake: Moose Creek, tributary to Big Hole River
- Location: Township: T1S Range: R9W Section: 34, 27, 26
- Latitude: 45° 43' 05" N Longitude: 112° 41' 33" W *within project (decimal degrees)*
- County: Silver Bow

B. Purpose of Project:

The overall objective of our Stewardship Fence Program is to help landowners construct and maintain wildlife-friendly fencing to effectively manage grazing in riparian areas along critical sections of the Big Hole River and important tributaries. The Moose Creek Meadow Stewardship Fence Project will fence one mile of this important tributary along nearly the Big Hole River to manage grazing. This project will promote bank stabilization, maintain healthy channel geometry, and provide cold water to a critical reach of the Big Hole.

C. Brief Project Description:

Our Stewardship Fence Program works with landowners to construct and maintain wildlife-friendly fencing to effectively manage grazing in riparian areas along critical sections of the Big Hole River and important tributaries. The Moose Creek Meadow Stewardship Fence Project is located along 1-mile of Moose Creek on the Moose Creek Ranch, about five miles north of Melrose, Silver Bow County, Montana. This project will fence the wet-meadow portion of Moose Creek immediately upstream of Interstate 15 with a 4-strand, wildlife-friendly fence (smooth bottom wire with 16.5-foot post intervals and follow all Future Fisheries fencing guidelines). Newly installed fence will tie into existing permanent fences. Moose Creek is an important tributary to the Big Hole River. Fish, Wildlife & Parks (FWP) fisheries surveys revealed its use as a spawning tributary. It provides year-round flow providing an important water source to the main river. A natural fish passage barrier exists on Moose Creek upstream on Bureau of Land Management land, so FWP is considering it for westslope cutthroat trout restoration. Currently, only Yellowstone cutthroat trout occur above the barrier. The landowner and a previous Future Fisheries Project fenced a mile of this important tributary to the Big Hole River immediately downstream of this project. Total project fencing will encompass one mile of degraded stream bank. Previous Future Fisheries fence projects averaged \$15,000 per mile of fence. Previous fence construction cost estimates used \$1.25 per foot for running fence cost; however, bracing, gates, and water breaks increases the per-foot cost substantially. Three bids were obtained from contractors for the estimated cost to construct this fence. The lowest estimated cost to build this project with 10% contingency was \$12,514. The project will be contracted as a single service contract. Because of the wildlife value of this meadow, any additional project funds will be used to construct jack-leg wildlife crossings in the project. Riparian monitoring before and after implementing this project will follow riparian monitoring protocols established by FWP and the US Fish and Wildlife Partners for Wildlife Program to assess project success. Future projects on this reach include pasture rehabilitation and stream channel restoration.

D. Length of stream or size of lake that will be treated: 0.90 miles

E. Project Budget:

Grant Request (Dollars): \$ \$3,000

Contribution by Applicant (Dollars): \$ \$3,000 In-kind \$ \$2,500

(salaries of government employees are not considered as matching contributions)

Contribution from other Sources (Dollars): \$ \$8,000 In-kind \$

(attach verification - See page 2 budget template)**Total Project Cost: \$ \$16,500**

F. Attach itemized (line item) budget – see template

G. Attach specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support, and/or other information necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete supplemental questionnaire (fwp.mt.gov/habitat/futurefisheries/supplement2.doc).

H. Attach land management and maintenance plans that will ensure protection of the reclaimed area.

III. PROJECT BENEFITS*

A. What species of fish will benefit from this project?:

By enhancing aquatic and riparian habitats along a one-mile reach of Moose Creek, and important tributary to the Big Hole River, this project will benefit fluvial Arctic grayling; westslope cutthroat, rainbow, and brown trout; and mountain whitefish as well as other non-game native fishes. Through improving the riparian habitats to help fish, all aquatic and riparian species benefit.

B. How will the project protect or enhance wild fish habitat?:

This Stewardship Fence Project will reduce intense grazing pressure along this important tributary, promoting bank stabilization, maintaining healthy channel geometry, reducing sedimentation, and enhancing riparian vegetation – all improving wild fish habitat. Most of the restoration projects in the Big Hole watershed consist of all or some of a similar recipe: fencing, channel or bank work, and planting vegetation. Degraded stream systems in the Big Hole generally require the replacement of lost functions or system components. As with the Moose Creek reach, degraded systems in the Big Hole generally have little riparian vegetation and widened and shallow stream geometry. As bankside riparian vegetation degrades, whether from grazing or mechanical removal, stream banks tend to erode laterally. This lateral erosion widens the stream. As the stream widens the pools begin to disappear, creating a shallower channel. Further, wide shallow stream channels reduce water quality by increasing water temperatures. To restore healthier stream and riparian functions, degraded functions need to be reversed or replaced. Fencing riparian areas reduces grazing pressure on stream side vegetation allowing it to recover. If only fencing is employed in degraded riparian and stream areas, riparian vegetation, and healthy stream geometry will eventually return.

C. Will the project improve fish populations and/or fishing? To what extent?:

Stabilizing degraded stream banks, improving stream channel geometry, enhancing riparian vegetation, and reducing sediment runoff will improve fish spawning conditions within this reach, thereby improving fish populations. Because the project area directly contributes fish to one of the four reaches on the Big Hole River where FWP staff conduct the twice-annual (September and April) electrofishing census efforts, evaluating this project's effect on fish populations may be indirectly assessed.

D. Will the project increase public fishing opportunity for wild fish and, if so, how?:

Because this project will occur entirely on privately-owned land, the project will not immediately increase public fishing opportunity through increased or improved access. However, Moose Creek is an important spawning tributary to the Big Hole River. Improving habitat conditions in important tributaries contributes substantially to the fisheries of the Big Hole River that will result in enhanced fishing opportunities for the public.

E. If the project requires maintenance, what is your time commitment to this project?:

The Big Hole River Foundation, funding partners, and the landowner are committed to this project. Funding from the other sources for this project are contingent "upon a grazing plan agreement between BHRF and the landowner, similar to an NRCS, FWP, etc. grazing agreement." As such, the Big Hole River Foundation and the landowner will enter into a 20-year management and maintenance agreement for this project prior to construction.

- F. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?:

The primary land use of the Moose Creek is irrigated agriculture and ranching. These activities, primarily intensive grazing immediately adjacent to the stream, have had substantial negative effects on stream channel geometry, riparian vegetation, and water quality. As bankside riparian vegetation degrades from unmanaged streamside grazing, stream banks tend to erode laterally. This lateral erosion widens the stream. As the stream widens the pools begin to disappear, creating a shallower channel. Wide shallow stream channels reduce water quality by increasing water temperatures. In addition, eroding streambanks contribute greater sediment loads into the river than would naturally occur, potentially smothering aquatic life and contributing to embeddedness of spawning gravels. This Stewardship Fencing Project will reduce intense grazing pressure along this river bank promoting bank stabilization, enhancing riparian vegetation, maintaining healthy channel geometry, and improve water quality of the Big Hole River.

- G. What public benefits will be realized from this project?:

This Stewardship Fencing Project will reduce intense grazing pressure along a degraded tributary to the Big Hole River promoting bank stabilization, enhancing riparian vegetation, and maintaining healthy channel geometry. These enhancements improve water quality through lower water temperatures and reduced sediment loads. Improved water quality enhances fish populations and improves riparian corridors.

- H. Will the project interfere with water or property rights of adjacent landowners? (explain):

Because this project will construct a fence on property controlled solely by the landowner, this project will not interfere with water or property rights of adjacent landowners.

- I. Will the project result in the development of commercial recreational use on the site?: (explain):

Because this project will construct a fence that will contribute to a better grazing management system for the landowner, this project will not result in the development of commercial recreational use on the site.

- J. Is this project associated with the reclamation of past mining activity?:

This project is not associated with the reclamation of past mining activities.

Each approved project sponsor must enter into a written agreement with the Department specifying terms and duration of the project.

IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature:

h. J. Burt

Date:

25 MAY 15

Sponsor (if applicable):

***Highlighted boxes will automatically expand.**

**Mail To: Montana Fish, Wildlife & Parks
Habitat Protection Bureau
PO Box 200701
Helena, MT 59620-0701**

**E-mail To: Michelle McGree
mmcgree@mt.gov**

**Incomplete or late applications will be returned to applicant.
Applications may be rejected if this form is modified.**

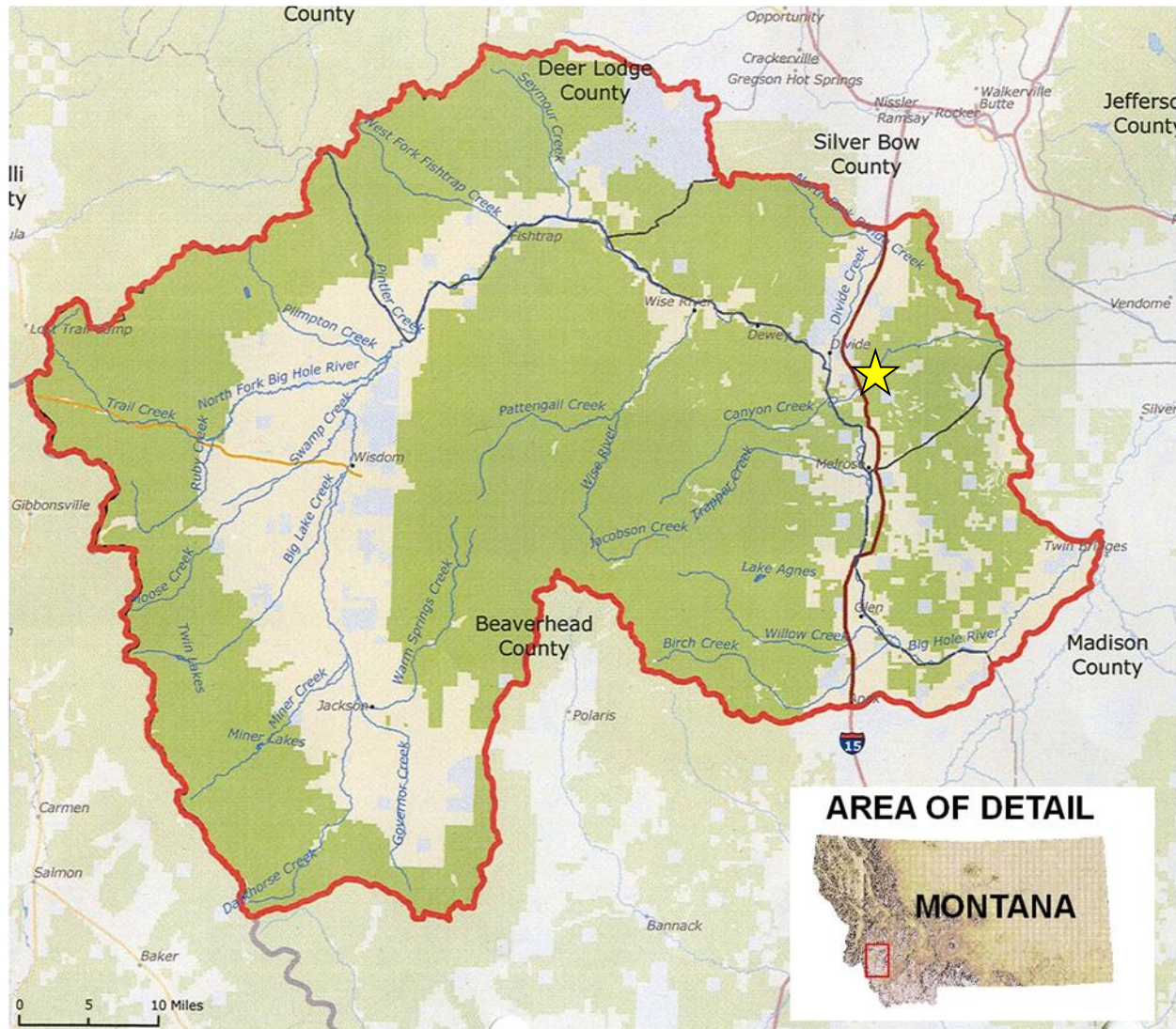
*****Applications may be submitted at anytime, but must be received by the Future Fisheries Program office in Helena before December 1 and June 1 of each year to be considered for the subsequent funding period.*****

WORK ITEMS (ITEMIZE BY CATEGORY)	NUMBER OF UNITS	UNIT DESCRIPTION*	COST/UNIT	TOTAL COST	CONTRIBUTIONS			
					FUTURE FISHERIES REQUEST	IN-KIND SERVICES	IN-KIND CASH	TOTAL
<u>Personnel</u>								
Survey				\$ -				\$ -
Design				\$ -				\$ -
Engineering				\$ -				\$ -
Permitting				\$ -				\$ -
Oversight	80	BHRF staff	\$31.25	\$ 2,500.00		2,500.00		\$ 2,500.00
Labor				\$ -				\$ -
<u>Service</u>								
<u>Contract</u>								
Fence construction	1	Lump sum	\$13,000.00	\$ 12,500.00	3,000.00		11,000.00	\$ 14,000.00
<u>Travel</u>								
Mileage				\$ -				\$ -
Per diem				\$ -				\$ -
<u>Construction Materials</u>								
				\$ -				\$ -
<u>Equipment</u>								
				\$ -				\$ -
<u>Mobilization</u>								
				\$ -				\$ -
TOTALS				\$ 15,000.00	\$ 3,000.00	\$ 2,500.00	\$ 11,000.00	\$ 16,500.00

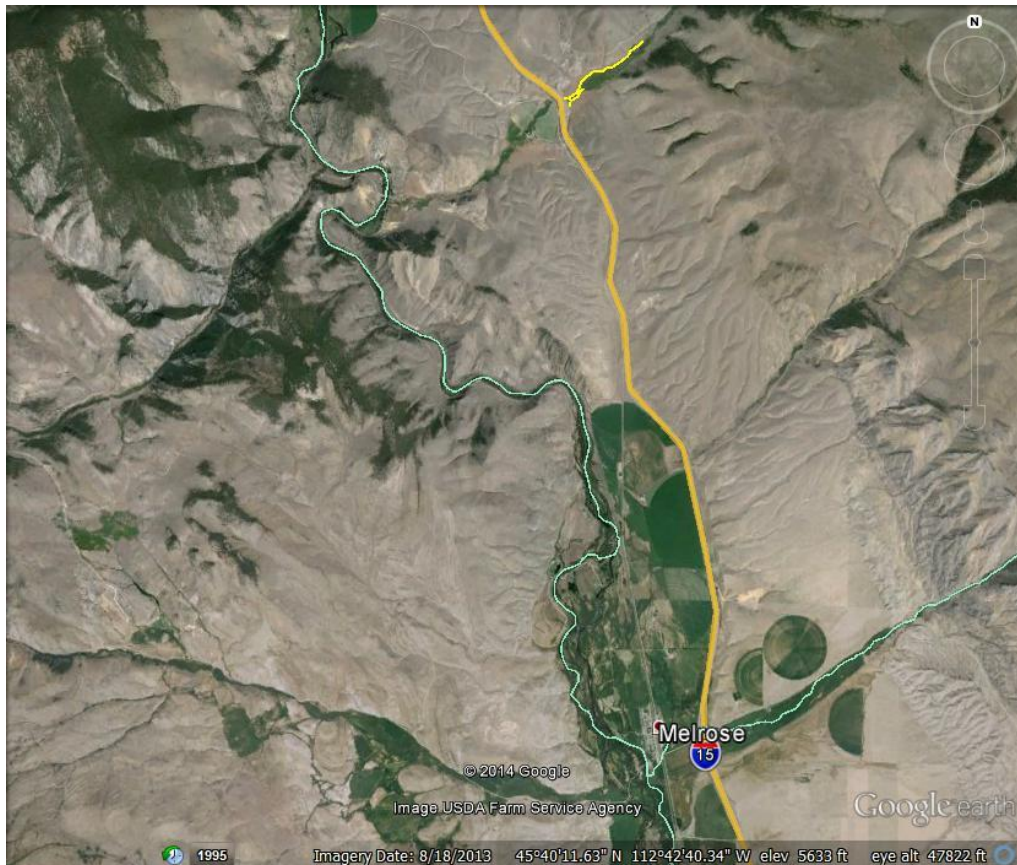
*Units = feet, hours, inches, lump sum, etc.

MATCHING CONTRIBUTIONS

CONTRIBUTOR	IN-KIND SERVICE	IN-KIND CASH	TOTAL
Big Hole River Foundation, staff project oversight	\$ 2,500.00	\$ -	\$ 2,500.00
Big Hole River Foundation, project-specific donations	\$ -	\$ 3,000.00	\$ 3,000.00
Montana Trout Unlimited via George Grant Chapter of TU	\$ -	\$ 5,000.00	\$ 5,000.00
Fish and Wildlife Service, Partners Program	\$ -	\$ 3,000.00	\$ 3,000.00
	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -
TOTAL CONTRIBUTIONS	\$ 2,500.00	\$ 11,000.00	\$ 13,500.00



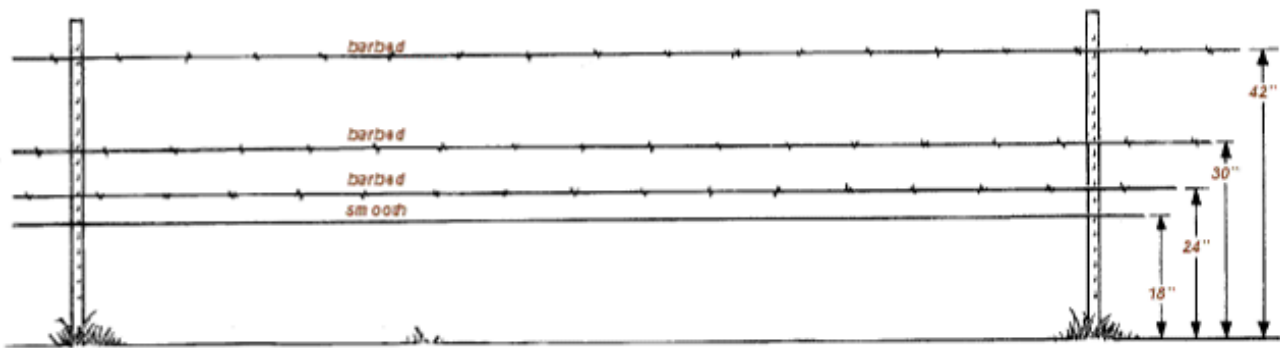
The Big Hole River Foundation's Stewardship Fence Project is located along the Big Hole River and tributaries in southwest Montana. Moose Creek, an important tributary to the Big Hole River, enters from the east and is located midway between Divide and Melrose, Silver Bow County, Montana. Nearly one mile of Moose Creek will be fenced through Moose Creek Ranch (yellow star) to manage grazing along this important tributary to the Big Hole River.



The Big Hole River Foundation's Moose Creek Meadow Stewardship Fence Project (yellow lines) is located along 1-mile of Moose Creek on the Moose Creek Ranch, about five miles north of Melrose, Silver Bow County, Montana.



The Moose Creek Meadow Stewardship Fence Project will fence the wet-meadow portion of Moose Creek immediately upstream of Interstate 15 with a 4-strand, wildlife-friendly fence (smooth bottom wire with 16.5-foot post intervals and follow all Future Fisheries fencing guidelines). Newly installed fence will tie into existing permanent fences.



The Big Hole River Foundation's Moose Creek Stewardship Fence Project will consist of 4-strand wire (smooth bottom wire) with 16.5-foot post intervals. Wire spacing will be 18 inches, 24 inches, 30 inches, and 42 inches from the ground.

MOOSE CREEK RIPARIAN FENCING moose creek meadow - current conditions

project area looking upstream (east) from moose cr.
Road adjacent to I-15.



EXAMPLES OF OVERGRAZING/UNMANAGED GRAZING

